

then, however, I have obtained specimens from Messrs. Macgillivray and Wilcox from the Clarence River, procured, I believe, from a nest found in a lagoon in the neighbourhood of Grafton.

Mr. Gould, in his magnificent work on our Australian birds, having given us beautiful figures of the nest and young, as well as of the adult birds, it will be useless for me to redescribe them here. I shall therefore not take up time by going over old ground, but proceed at once to say what the eggs are like. They vary in form from being quite oval and pointed equally at both ends, to almost round or pyriform as in some of the Plovers. When of this last shape, they are usually placed in the nest with their small ends pointing inwards. In length they are from $13\frac{1}{2}$ to $14\frac{1}{2}$ lines, and in breadth from 10 to 11 lines. The ground-colour is a light yellow olive, becoming with time much darker. The whole surface is crossed and re-crossed with irregularly curved and rather broad black lines, turning and twisting in every direction, and, in some examples, with shorter lines, making various ill-shapen letters or figures, while in others these markings take the form of blotches. Appearing beneath the shell are deep yellowish-brown streaks and hair-lines recrossing them on the surface. Some specimens are more numerously streaked than others, and have the broader black lines predominating; in others the fine hair-lines and those of yellowish brown are most visible. The eggs are four in number; and the nest, which is composed of sedge, grass, and aquatic plants, is placed close to the water's edge, or upon any bunches of weeds or grass growing in the water, which may be sufficiently strong to bear its weight.

XXVII.—*Notes on Krüper's Nuthatch and on the other known Species of the genus Sitta.* By P. L. SCLATER, F.R.S., &c.

(Plate VII.)

DR. HARTLAUB having kindly forwarded for my examination a pair of the newly discovered Nuthatch of Asia Minor (lately described by Herr von Pelzeln of Vienna, as noted in the last

Ibis 1865. Pl. VII.



J. Wolf. del. et lith.

M. & N. Harhart imp

SITTA KRUEPERI.

volume of the 'Ibis' *), belonging to the Bremen Museum, I have gladly acceded to our Editor's request to have a figure of this very interesting species prepared by Mr. Wolf, and to write a few notes on the subject.

Herr von Pelzeln having given an excellent description of *Sitta krueperi* in his article on the subject, in the 'Sitzungsberichte' of the Imperial Academy of Sciences of Vienna, I confine myself to a diagnosis containing the more noticeable characters.

SITTA KRUEPERI, v. Pelzeln. (Pl. VII.)

♂. Plumbea; pileo postice rotundato nigro; superciliis et gula tota albis; torque pectorali lata castanea; abdomine dilute cinereo; crisso castaneo mixto; rectricibus nigris, harum autem duabus mediis et ceterarum apicibus plumbeis. Long. tota 3·5, alæ 2·8, caudæ 1·5, rostri a rictu ·75, tarsi 0·7 poll. Angl. et dec.

♀. Mari similis sed coloribus dilutioribus; pileo nigro minus extenso et torque pectorali non bene definita.

Hab. Asia Minor, prope Smyrna (*Krüper*).

Mus. Vindob. et Bremensi.

There is no known species of the genus *Sitta* that resembles *S. krueperi* in colouring sufficiently nearly to be confounded with it. Its distinct black cap rounded behind, its broad chestnut pectoral band, and its small size separate it at once from all other Old-World species of the group. In size it is about equal to *S. pygmæa* of California and Mexico, but does not otherwise resemble any one of the known American species.

The appearance of this new and marked form so near the confines of Europe as Smyrna is a fact of great interest, particularly when taken in connexion with the discovery of the Titmouse recently described by Dr. Günther from the same neighbourhood (*suprà*, p. 95). It shows us that the fauna of Asia Minor is by no means so fully worked out as has been supposed, and that novelties of the most attractive character still await the researches of the naturalist at a very short distance from the civilization of Europe, and in a country where access is easy and travelling secure.

The birds from which Mr. Wolf's figures (Plate VII.) are taken, were obtained by Dr. Krüper in the months of April and June 1864, near Smyrna.

* Ibis, 1864, p. 402.

I take the opportunity of adding a few notes on the other known species of the genus.

The Old-World or Palæogean species of *Sitta* are nearly confined to the Palæarctic Region; one species only being found within the Indian Region. They number eight species, which may be divided into the following sections:—

1. The large isolated *Sitta formosa*.
2. The middle-sized species allied to *S. europæa*, all of which are plumbeous above, have a black line through the eye. Of this group we know five—namely, *S. syriaca*, *S. europæa*, *S. himalayensis*, *S. cinnamomeiventris*, and *S. castaneiventris*.
3. The little *Sitta krueperi*, which stands quite alone.
4. *Sitta leucopsis* of the Himalayas, which is most nearly allied to *S. carolinensis* of North America.

The New-World or Neogean members of the group are four in number, all very easily distinguishable if we treat *S. aculeata* as a local form of *S. carolinensis*.

I add a few remarks, chiefly relating to the geographical distribution of these twelve species.

1. *Sitta formosa*, Blyth: Gould, B. Asia, part i. pl. 6.

This fine species is readily known by its large size and brilliant colouring, being of a fine cobalt-blue above, and thus distinct from the other known species of *Sitta*, which are all of some shade of plumbeous on the back. It somewhat reminds one of the allied genus *Dendrophila*. According to Dr. Jerdon (B. India, i. p. 387), it has hitherto only been met with in Sikim, at an elevation of from 7,000 to 8,000 feet.

2. *Sitta syriaca*, Ehrenb.

This fine large species, although as regards its coloration appertaining to the typical group, differs in habit and slightly in structure, being entirely a rock-climbing species. It extends from Dalmatia and Epirus (where it is common*) over the Grecian peninsula and Asia Minor† into Palestine, where specimens were recently obtained by Mr. Tristram‡.

Examples collected in Candahar and in the Bolan pass,

* Lord Lilford in 'Ibis,' 1860, p. 232.

† Neighbourhood of Smyrna (Gonzenbach).

‡ P. Z. S. 1864, p. 433.

Afghanistan, by Mr. William Griffith, during the government expedition to those countries, do not materially differ from the European bird, so that we may conclude that it inhabits all the intermediate region of Western Asia.

3. *Sitta europæa*, Linn.

This well-known species, under its two forms, *uralensis* (sive *sibirica*) and *cæsia*, seems to be distributed nearly all over the northern portion of the Palæarctic Region, except the Himalayas. Dr. Blasius has written an excellent article on the subject of its variations in 'Naumannia' for 1856 (p. 433), which should be studied by those who still hold out for the specific distinctness of the white and rufous-breasted forms.

In Middle and Southern Europe (including the British Islands) *Sitta cæsia* is the predominant form. In middle and northern Germany, in Denmark, and in many provinces of Russia, an intermediate stage occurs, which Brehm calls *Sitta advena*. In Scandinavia, northern Russia, and throughout Siberia, *Sitta uralensis* is the usual form, although Von Schrenck has shown that *S. cæsia* and intermediate varieties also occur in southern Amoorland. In Japan *Sitta uralensis* is found in the northern islands of Yesso*, and possibly *S. cæsia* in the southern islands†.

In Mr. Tristram's recent article on the "Birds of Palestine" (P. Z. S. 1864, p. 433), he has introduced what appears to me to be scarcely more than a slight variety of the *Sitta europæa*, var. *cæsia*, under the name *Sitta krueperi*. The under-surface of the Palestine bird is of a deeper rufous than in ordinary European specimens, but is hardly otherwise different. *Sitta europæa*, var. *cæsia*, likewise occurs in Algeria‡.

4. *Sitta himalayensis*, Jard. & Selb.: Gould, B. Asia, pt. i. pl. 10.

This is the Himalayan form of *Sitta europæa*, from which it may be distinguished by the distinct white spot near the base of the

* See Cassin, Proc. Acad. Sc. Phil. 1858, p. 195. Capt. Blakiston calls this species "*S. roseilia*, Bp.", in his interesting article in 'Ibis,' 1862, p. 322.

† Cf. Von Schrenck, Amoorland, i. p. 314.

‡ Cf. Loche, Cat. p. 77.

two central rectrices. In *S. europæa* the two central rectrices are uniform plumbeous, like the back. *Sitta himalayensis* is found on the southern slopes of the Himalayas, being numerous in Sikim and about Darjeeling. It also occurs in Nepal (*Hodgson*); Bootan (*Pemberton*); and Kumaon (*Strachey*).

5. *Sitta castaneiventris*, Franklin: Gould, B. Asia, pt. i. pl. 8.

This Nuthatch, distinguishable by the deep chestnut colouring of the breast in the male bird, is the only species of the genus found in the peninsula of India. According to Dr. Jerdon it occurs in nearly all the jungles of Southern and Central India, being most common near Nagpore, in the Vindhyan range, in Bundelkund, in Goomsoor, and in the Northern Circars.

6. *Sitta cinnamomeiventris*, Blyth: Gould, B. Asia, pt. i. pl. 7.

This Nuthatch is a close ally of the last species, but smaller in dimensions, and with the "bill broader and not so much compressed." Dr. Jerdon obtained specimens of it in Sikim. Specimens were collected by Pemberton in Bootan, and by Hodgson in Nepal.

7. *Sitta krueperi*, v. Pelzeln.

This bird, as far as we hitherto know, is only found in Asia Minor, near Smyrna, Mr. Tristram's *Sitta krueperi* of Palestine (P. Z. S. 1864, p. 433) being, as we have already stated, hardly different from *Sitta europæa*, var. *cæsia*.

8. *Sitta leucopsis*, Gould, B. Asia, pt. i. pl. 9.

This well-marked species belongs to the same group as *Sitta carolinensis*, and is readily distinguishable from every other Asiatic species by its black head and nape. In *Sitta krueperi* the nape is grey, like the back.

Major W. E. Hay's specimens of this species, from which, we believe, Mr. Gould's figures were taken, were obtained in the Mahasoo forest, near Simla, at an elevation of 8,000 feet.

9. *Sitta carolinensis*, Lath.

This well-known species seems to be generally distributed over the North-American continent, from New Brunswick on the east coast and Washington Territory on the west, down to the isthmus of Tehuantepec. Mr. Cassin has separated the

western form as *Sitta aculeata* *; but Prof. Baird states that its "only appreciable difference" is the "much slenderer bill." I have no eastern examples in my collection, but I have Mexican skins from Jalapa and Oaxaca. These have the bill decidedly shorter and perhaps a trifle stouter than a Californian skin kindly furnished to me by Prof. Baird, but do not quite agree with one another, the Oaxacan bird having the shortest of the two. Prof. Baird says that specimens from Washington Territory are also intermediate.

10. *Sitta canadensis*, Linn.

This little species, which, except in size and its black head, reminds us of the group of *Sitta europæa*, has also a wide range, but does not go nearly so far south as the last, not apparently reaching Mexico, or even Texas. It seems, on the other hand, to wander very far north; for a specimen in the British Museum is marked as having been obtained by Dr. Rae in Repulse Bay, on the south side of Melville Peninsula, lat. 66° N. *Sitta canadensis* is common in Canada and all across the Rocky Mountains to British Columbia, numerous specimens having been obtained by Mr. Lord during the "Boundary" Survey. Prof. Baird registers specimens from various parts of California.

11. *Sitta pusilla*, Lath.

This little species appears to be confined to the southern Atlantic States of North America,—South Carolina and Georgia being its head-quarters.

12. *Sitta pygmæa*, Vigors.

Sitta pygmæa represents the last species on the western coast, where it ranges as far north as Washington Territory. Descending southwards it gradually extends eastwards, as is the case with many other Californian species, and pervades the table-land of Mexico. I have never had an opportunity of comparing my example from Xalapa (collected by De Oca) with north-western specimens, but I have little doubt as to their identity.

* Proc. Acad. Phil. 1856, p. 254.